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Finance and e-finance for SMEs as a means to enhance their operations and competitiveness

Issues paper by the UNCTAD secretariat

Executive summary

Promoting SME development is a major challenge for both Governments and international agencies. Traditional approaches have not always proven effective, particularly in facilitating access to finance. Despite their dominant numbers and importance in job creation, SMEs have faced great difficulty in obtaining formal credit and equity. Commercial banks and investors have been reluctant to service SMEs for a number of well-known reasons, including high risks and transaction costs. The need for new approaches is paramount. There have been a number of advances in using innovative mechanisms that increase the profitability of lending to SMEs. Internet may offer the necessary tools to facilitate the development of such approaches. Internet-mediated electronic financial services, known as e-finance, can bring about drastic improvements in the costs and speed of delivery of those services. Hence there are expectations that SMEs might improve their access to finance through e-finance. This issues paper focuses on SMEs in the formal sector in developing countries and their access to finance and e-finance and what can be done to improve that access, including the use of the latest innovative mechanisms, as well as information technology.

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I. FINANCING SMEs

Introduction

1. The economic creativity of a nation depends on its enterprises and the ease with which they can start and finance their businesses, as well as on their access to technology. A good general business climate is a combination of many factors generally known as the "enabling environment". It is a broad concept encompassing stable macroeconomic policies, a favorable legal, commercial and regulatory framework, and physical, social and institutional infrastructure. Particularly important for private sector development is legislation that provides for the creation of business entities, enforcement of contracts, private ownership and transfer of property, assessment and payment of fair taxes and currency convertibility. This issues paper focuses on formal-sector small and medium-size enterprises (SMEs) in developing countries and on improving their access to finance through innovative mechanisms, including e-finance and information technology.

2. Finance has been identified in many surveys as among the most important problems facing SMEs in both developing and developed countries. Access to finance is a crucial factor that determines the capability of SMEs to undertake productive investments to expand their business and to employ the latest technologies, thus ensuring the competitiveness of the sector and of the nation as a whole. Thus, poorly functioning financial systems can seriously undermine the microeconomic fundamentals of a country, resulting in lower growth in income and employment.

1. Financing SMEs

3. Despite their dominant numbers and importance in job creation, SMEs traditionally have faced difficulty in obtaining formal credit or equity. Traditional commercial banks and investors have been reluctant to service SMEs for a number of well-known reasons, which have been explored in numerous expert meetings[1]. Among them are:

- SMEs are regarded by creditors and investors as high-risk borrowers due to insufficient assets and low capitalization, vulnerability to market fluctuations and high mortality rates;
- Information asymmetry arising from SMEs' lack of accounting records, inadequate financial statements or business plans makes it difficult for creditors and investors to assess the creditworthiness of potential SME proposals;
- High administrative/transaction costs of lending or investing small amounts do not make SME financing a profitable business.

4. As a result, commercial banks are generally biased toward large corporate borrowers, who provide better business plans, more reliable financial information, better chances of success and higher profitability for the banks. When banks do lend to SMEs, they tend to charge them a commission for assuming risk and apply tougher screening measures, which drives up costs on all sides.

5. Many Governments and international financial institutions have tried to address the problems of high transaction costs and risks by creating subsidized credit programmes and/or providing loan guarantees. Such projects have often fostered a culture of non-repayment or failed to reach the target group or achieve financial self-sustainability.

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[1] See for example "Issues concerning SME's access to finance" in Development Strategies and Support Services for SMEs: Proceedings of Four Intergovernmental Expert Meetings, UNCTAD 2000.
"The SME-financing Gap and New Financial Products for SME's in Developing Countries and Eastern Europe" Committee of Donor Agencies for Small Enterprise Development, Vienna, October 2000.

6. A more efficient approach to ensure well-functioning and self-sustainable mechanisms for SME financing is to focus on market forces. It is a prerequisite that financial institutions find SME lending to be more profitable, which would encourage them to construct lending programmes targeted for SMEs. The following section explores some of the techniques and mechanisms that banks and other organizations are using in developed countries to increase the profitability of lending to SMEs. Later on we explore what Governments and international organizations can do to encourage the use of such mechanisms in developing countries.[2]

2. Initiatives undertaken by banks in the United States and European Union

7. To compete effectively in the SME financing sector, banks need to provide financial services that meet the specialized needs of SMEs while coping with high risks and costs associated with servicing SME customers. An increasing number of banks have concluded that a separate strategy focusing on specialized needs of SMEs can result in considerable improvement in the relationship with this sector, as well as in an increase in profits. Innovative approaches undertaken by banks to serve the SME clients include:

- Reducing high risks of SMEs and information asymmetry by using special programmes for start-ups, credit scoring, and external information providers, e.g. appraisal services and rating services;
- Reducing the costs of lending by streamlining organizations, applying the latest information technology, direct mail services, etc;
- Improving financial services for SMEs through training programmes for bank staff;
- Segmenting of SME customers.

2.1 Initiatives to deal with high-risk customers

8. The **Bank of Ireland** has set up an Enterprise Support Unit (ESU) that has provided 10 year funds and hands-on support to start-up SMEs. To date the ESU has lent 50 million euros to over 550 companies. The ESU operates outside conventional criteria: personal guarantees or asset-backed securities are not taken. The ESU lends to high-risk business at normal rates and also participates in several seed capital funds providing tailored equity to start-up companies. It gives access to Business Skills Workshops, Enterprise Forums and specialist SME advisers throughout Ireland. These services are provided at subsidized rates in cooperation with First-Step, a non-profit organization providing business development services. The rationale behind the apparent subsidy provided by a private bank to young upcoming SMEs is to secure a strong customer base in the future.

2.2 Initiatives to reduce information asymmetry

9. Part of the reluctance of banks to lend to SMEs is the banks' inability to evaluate risk because of the lack of reliable financial information. In well-developed and stable financial markets, creditors and investors usually demand and receive transparent, reliable and comparable financial information. The better the information, the higher investor confidence and the lower the cost of capital. Such financial information is provided in financial statements, which follow national or even international accounting standards. Banks and regulatory authorities can even demand more information than what is publicly available or required. In addition, financial analysts, rating agencies or business intelligence providers generate information which is available to creditors and investors.

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[2] A fuller discussion of innovative mechanisms is contained in the background paper, "Recent Innovations in SME Finance".

10. However, even in highly developed economies, such as the European Union, SMEs are not required to report on their financial performance in a standardized manner if they do not reach a significant threshold in total assets, turnover and/or number of employees. This means that the many SMEs in developed and developing countries do not produce comparable financial information which could be used by creditors or investors. Instead, these users are left to specify for themselves what financial information they require, thus placing a costly burden on SMEs to comply with different reporting formats. Even more important, the majority of SMEs do not generate the basic financial information the entrepreneurs need for efficient management.

11. After reviewing the many hurdles SMEs face in generating reliable financial information, the Intergovernmental Working Group of Experts on International Standards of Accounting and Reporting (ISAR) identified several desired characteristics that should be in an accounting system for SMEs. These include user-friendliness, flexibility to accommodate growth, standardized formats and adherence to generally accepted accounting practices. Such a system could reduce information asymmetry faced by creditors and investors, as well as provide in useful management information to entrepreneurs. The innovative mechanisms used by financial institutions for credit appraisal and rating such as credit scoring presuppose the existence of such reliable financial information, so the basic precondition for using such mechanisms to reduce both transactions costs and risks is reliable accounting information.

12. Leading banks in SME lending such as **Wells Fargo, Citibank** and **Bank of America** have developed credit scoring systems to improve risk management in lending to SMEs. Credit scoring is a statistically based means to assign a single quantitative measure, or score, to a potential borrower representing an estimate of the borrowers's future loan performance. A credit scoring system would typically identify characteristics of borrowers that best predict loan repayment and assign numerical weights to these characteristics to obtain a credit score. Credit scoring has proved to be an efficient and cost-effective way to evaluate the risk of smaller borrowers.

13. For the upper segment of SMEs, several business appraisal and rating services have been launched in Europe. The aim of these services is to provide risk assessments for banks in cases where highly specialized skills are needed, such as high technology companies. Examples include **Technet** in Austria where banks, investment companies and business angels can refer to a network of experts in technology appraisals. **ENTAS**, set up by banks and specialized expert organizations in Germany, the Netherlands and the United Kingdom, aims to develop an EU-wide network of appraisal experts.

2.3 Initiatives to reduce the cost of lending by improving the efficiency of bank operations

14. Banks have for a long time been at the forefront in successfully applying the latest information technologies (IT) to improve the efficiency of operations in a wide variety of banking products. This topic will be discussed in greater detail in part II. An area in which the least progress has been made by banks is the standardization of financial products - although some developments have been observed in recent years. According to the American Advisory Board Company, banks that effectively exploit the efficiency gains from standardization can double their profitability compared to competitors who do not adopt these strategies.

15. Standardized products are being marketed via direct mail campaigns. **Wells Fargo**, the leading US bank focused on SME financing, pioneered the use of direct mail (direct marketing) to offer credit lines to small businesses across the United States. Direct mail is a proactive approach by banks to approach potential SMEs with credit proposals. Thus, SME customers are approached in much the same way as private households.

2.4 Improving financial services for SMEs

16. **Swedbank** and **NatWest** recognized that the competence and experience of its staff was crucial in competing effectively for SME business, as well as also for managing the credit risk inherent in SME banking. In response, both banks launched training programmes for its SME staff with two objectives: firstly, to boost the bank's competence in servicing particular needs of its SME customers; secondly, to create a sales organization which was both proactive in its approach and sensitive to SME customer needs.

17. By segmenting SME customers, banks can develop standardized services that are especially suited for particular sectors, e.g. reserving personalized services for the most profitable customers while encouraging use of automated services for less profitable customers. **CERA Bank** uses a segmentation method called "splitting", which is based on the size and nature of the customer, whereas **Groupe Banques Populaires** segments according to the profitability of the customers.

3. Complements to finance

3.1 Insurance

18. SME entrepreneurs tend to have little or no physical security to offer as collateral. When the guarantee provided by the entrepreneur is insufficient, guarantees, either total or partial, securing the bank's ability to recover loanable funds in the case of default may be available from public and/or private bodies.

19. There are a number of types of insurance available to SMEs that can reduce the lender's risk and potentially improve SME access to credit. Some of the more typical schemes include loan guarantee schemes, mutual guarantee funds and export credit insurance.

20. **Loan guarantee schemes** are set up by Governments and international financial institutions such as the International Finance Corporation with the purpose of covering some portion of the losses incurred if borrowers default on loans, thus reducing the perceived risk of SMEs to the lending institutions. The objectives of these schemes are: helping small entrepreneurs with good projects but little collateral to obtain loans; encouraging banks to overcome their reluctance to deal with SMEs; and providing banks with the opportunity to learn more about how to deal with SMEs' loan-portfolios and how to lend profitably to SMEs.

21. The loan guarantee schemes provide a guarantee to the lending institution, against a fee (which varies between 1 per cent and 4 per cent of the loan amount) paid by the bank or passed on to the borrower. Most schemes offer guarantees of between 60 and 80 per cent of the loan amount. One of the major arguments in favour of guarantee schemes is that these funds can reach important levels of leverage (five times or much more in developed countries). This means that for each US$ 1 million in the fund, a volume of US$ 5 million or more in credits to SMEs can be guaranteed.

22. Credit guarantee schemes are quite widespread. A study financed by the United Kingdom's Overseas Development Administration in 1997 identified around 70 credit guarantee schemes that are operating in all parts of the world - some of them in the least developed countries[1].

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[1] Levitsky Jacob, "Credit Guarantee Schemes for SMEs - an international review", Small Enterprise Development Journal, Vol. 8, No 2, June 1997. Actually only 61 of the schemes were studied in detail. Of these 23 were in OECD countries, 6 in CIS, 15 in Latin America, 11 in Asia and 6 in Africa.

23. There is no international consensus that loan guarantee schemes are an effective way of widening SMEs' access to formal bank loans. They have been criticised for a number of weaknesses such as: moral hazard problems; high administrative costs due to inadequate procedures and inexperienced/reluctant staff dealing with SME loan portfolios; delays in paying claims, which undermines the banks' trust in guarantors; and low demand by SME borrowers, as well as banks' limited outreach.

24. Some of the problems identified above could be resolved if bank staff were properly trained and motivated to deal with SMEs. The administrative costs of credit appraisal and monitoring SMEs could also be reduced by outsourcing these activities to business development service (BDS) providers. Lastly, moral hazard could be reduced by giving partial loan guarantees versus full loan guarantees.

25. In France, local SMEs give guarantees to each other. There are 115 active Mutual Guarantee Funds, backed by 300,000 trading and industrial enterprises. Founded by SMEs on a voluntary basis, they help satisfy the credit needs of fellow enterprises. The purpose of the Mutual Guarantee Societies is to safeguard the professional and personal activities of their shareholders, rather than to generate profits. They make contact with SMEs who require loans by means of their local reputation, in cooperation with a regional bank. The bank, however, does not play an exclusive role as intermediary. A Mutual Guarantee Society consults with the banks when checking guarantee requests but plays the leading part in the decision process. The assessment criteria used consist of judging the entrepreneur as an individual, the business proposal, the sector and the financial criteria.

26. In the Netherlands also, additional loan guarantee funds have been raised through private initiatives. They aim at specific target groups which banks consider particularly risky, such as start-ups and businesses founded by women or members of ethnic minorities. **Mama Cash** gives additional guarantees to persuade bankers to offer loans to female start-ups without enough collateral. The loan guarantees of Mama Cash are given "subject to a number of criteria being satisfied, including submission of a full business plan and the prospect that the entrepreneur will be able to support herself from the business after one year."[4]

27. **Export credit insurance** is a guarantee against payment defaults by foreign buyers, cancellation of specific orders by foreign clients and defaults on debt repayment by the exporter to the lending institution providing finance facilities. Export credit insurance schemes are especially beneficial for SMEs seeking to internationalize their activities. There are a number of different types of structures that can accommodate credit insurance schemes. In most cases, the most efficient solution is to form a specialized credit insurance company. Whether it should be a private or a public institution depends exclusively on the emergence of private initiatives to enter such a market. Often the most efficient approach has been to combine private and a public efforts to supply export credit insurance. This type of insurance can play a distinct role in securing export credit, but at present this facility is not being widely used for SMEs.

28. **Israel Foreign Trade Risk Insurance Corporation Ltd**. provides insurance against export-related risk. Exporters buy coverage for goods and services for up to 90 per cent of their value against commercial risks, such as bankruptcy and protracted defaults, as well as political risks, which include war, political upheaval, currency restrictions, confiscation, and other discriminatory actions in the buyers' countries. In 1999, the insured exports amounted to US$3.65 billion and the number of insured countries reached 96. Such insurance is particularly beneficial to SMEs as it provides leverage for financing through the guarantee of their export revenues.

3.2 Leasing

29. There are two types of leasing. One form of leasing is financial leasing, in which the leased equipment is treated as if it were the property of the customer by both sides of the contract. The customer is responsible for maintenance of the property throughout the contract period. The other form is operational leasing, in

[4] The special problems faced by women entrepreneurs are treated in the background paper, "Recent Innovations in SME Finance".

which the responsibility for registration and maintenance of the equipment remains with the financing company. The customer only makes monthly payments to the company, as agreed upon in the lease contract.

30. In operational leasing, the rents collected from the customer during a contract period do not cover the full cost of the equipment, since it is to be returned to the financing company at the end of the contract period. This type of leasing is particularly popular in the high-tech industry, which is characterized by rapid rates of technological innovation and the continuous need for equipment upgrading.

31. Compared to traditional loans, credit risk is higher in leasing from the financing company's point of view. The outstanding debt balance cannot be called in regardless of the condition of equipment. The value of equipment depends on factors beyond the control of the financing company, such as the timing of a new model being introduced to the market, the taxation rate, overall economic conditions, and so on.

32. However, leasing is a convenient option to help SMEs meet their needs for business equipment in the sense that:

- Collateral is not required for the contract and the customer can finance up to 100 per cent of the equipment value;
- A contract can be written with some flexibility according to the customer's cash flows;
- Tax policies tend to provide business firms with tax shelters by allowing for the depreciation of equipment value;
- The financing company is likely to have good relationship with the equipment supplier due to a large volume of transactions, and this can help accommodate the customer's needs;
- The economies of scale enjoyed by the financing company may be passed on to the customer in terms of reducing the costs of equipment usage;
- Not only equipment but also expertise in the equipment will be offered to the customer; and
- Approval time is short.

On the other hand, a number of drawbacks exist, and leasing may not be suitable for all SMEs. For example:

- Missing a lease payment can lead to the re-possession of equipment and in turn to the termination of the SME's operations;
- Tax advantages granted on lease payments may not be as large as those granted on interest payments if SMEs purchase equipment on a loan;
- Availability of equipment that can be leased may be limited.

33. **Finarca** began operations in **Nicaragua** in 1997 specializing in the financing of equipment and machinery. It has established funding relationships with a number of international organizations and investors. At the local level it has established alliances with leasing and vendor companies. Finarca has a special leasing programme for SMEs, especially for transportation and delivery vehicles, machinery for dairy products, bakeries and leather products and copying and printing machines. Typical amounts range from US$ 10,000 to US$ 300,000, and the duration of leases is from 24 to 60 months. Some of the benefits of financial leasing that Finarca mentions are tax benefits, accounting benefits, flexible terms, no collateral requirement and up to 100 per cent financing. Experience indicates that sponsors need to be committed, local regulatory and government agencies should be involved, support and advice is important but micro-management should be avoided, and specialization does bring advantages.

34. In **Pakistan**, the Swiss Agency for Development Cooperation (SDC) actively supports leasing to micro and small enterprises. The SDC decided to work in the leasing industry in Pakistan in order to test the

potential for private sector financial institutions to contribute to the development process and to test the viability of leasing as a source of finance for small enterprises. The SDC works through partner companies, the first of which was the Network Leasing Corporation (NLC), established in 1995 and receiving SDC support shortly thereafter. NLC provides lease financing and development services for small and micro enterprises. NLC has been able to generate a lease portfolio of US$ 6.3 million with 1,700 clients and has received a rating from an internationally recognized agency allowing it to access capital directly from the financial markets.

4. Innovations in equity financing - venture capital funds

35. Venture capital involves the provision of investment finance to private small or medium-sized companies in the form of equity or quasi-equity instruments not traded on recognized stock exchanges. It is long-term risk finance where the primary return to the investor is derived from capital gains rather than dividend income. Venture capital investors are actively involved in the management of the investee company, with the intention of helping to assure the success of the venture.

36. A distinction is usually made between venture capital and seed capital. Seed capital refers to direct equity capital in start-ups in the initial rounds of finance. Venture capital, on the other hand, refers to the next round of finance in companies that have achieved stability and have strong growth potential.

37. A venture capital fund would typically invest in an SME in a high-growth sector looking to expand its operations. Venture capital can also play a role in buy-outs of more established companies. The involvement of a venture capitalist is usually from 2 to 4 years, after which the venture capitalist will typically either sell the shares of the company on a stock exchange, e.g. an initial public offering (IPO), or sell the whole stake in the company, e.g. to a more established competitor.

38. Venture capital has the potential of offering a valuable source of finance complementing the more traditional credit finance provided by commercial banks. Some of the fundamental reasons hindering SMEs from obtaining credit from commercial banks and other credit institutions are less important in attracting venture capital.

- Venture capitalists are willing to accept higher risks than traditional banks in exchange for potentially large gains from sale of shares in the company.
- Venture capitalists do not require collateral from borrowers.
- Operating costs are lower due to the absence of high interest rate payments.
- Venture capital - by nature - is long-term or at least medium-term capital, in contrast to short-term loans from banks.
- The managerial know-how provided by venture capitalists can in some cases be more valuable to the start-ups or SMEs than the actual financing received.

However, there are also a number of drawbacks.

- As in traditional bank lending, operating costs associated with lending a small amount may discourage investors.
- The need for highly liquid markets is not as pressing compared to open-end funds or mutual funds, since venture capital funds have a long-term involvement in the companies they invest in. Nevertheless, an exit mechanism is necessary for venture capitalists to attain capital gains. This is difficult in almost all developing countries except those with emerging capital markets. Other mechanisms such as guaranteed buy-backs do not seem realistic for SMEs.
- As the majority of companies that venture capitalists invest in either fail or yield only modest profits, successful ventures must generate large enough returns to cover losses incurred from the less successful

investments. The need for potentially very high profits rules out the bulk of SMEs and start-ups that do not have the potential of becoming future mega-companies and is one reason venture capital is concentrated in high technology sectors.

39. To date the United States has clearly been the most important market for venture capitalism. A number of the country's leading corporations - Federal Express, Microsoft and Intel to name a few - received venture capital in their early stages, which demonstrates the important role that venture capital funds play in the economy. Some key aspects of the leading position of the United States arise from an enabling legislation and a business culture that promotes entrepreneurship. However, in recent years Europe as well as developed areas of Asia have been quickly catching up.

40. In developing countries the role of venture capital - especially commercially oriented capital - has been very limited. Only big and/or relatively advanced emerging markets have been targeted by a small number of internationally active venture capital funds. Typically, developing countries lack potential investment opportunities (a large number of young companies with strong growth potential), and exit possibilities are usually restricted to a sell-back to the original promoters, which does not allow for profits comparable to those achievable through listing or trade sales to strategic investors. Furthermore, investing in local SMEs in developing countries often involves working with entrepreneurs who are not familiar with conventional financing relationships and business practices, which substantially increases the amount of work required from the investor.

41. There are, however, a number of development-oriented venture capital funds that are relatively active in the developing and transition countries. One of the more active players in the field is **SEAF** (Small Enterprise Assistance Funds), which has established venture capital funds in the Baltic region, Bolivia, China, Peru, Poland, Russia and some other countries. SEAF manages some US$130 million in funds and has a portfolio with over 160 investments. SEAF capital sources include multilateral institutions, bilateral development agencies and private foundations. SEAF provides SMEs with long-term venture capital combined with technical assistance. SEAF recognized that its model would not work unless the investees themselves saw that the investments were made on a commercial basis. Many of the funds established by SEAF have in recent years become profitable. At the same time management costs have declined from 8 per cent to somewhere between 2.5 and 3.5 per cent.

42. The **EIB** (European Investment Bank) has established venture capital funds in Africa. The funds have been used to acquire an equity share in small enterprises and to provide business guidance to these enterprises. The objective was to realize commercial returns by participating in profits and capital gains. The success of these investments in Africa (i.e. rate of return and percentage of failures) is not that different from performance in other countries. All in all, in 2000 the EIB made available 215 million euros in risk capital to African and some other developing countries[5]. Some of the observations made by the EIB include the following:

- Macroeconomic instability makes it difficult to make earnings projections;
- Management skills are in short supply in Africa;
- Uneven accounting and auditing standards provide opportunities for "massaging" numbers;
- A minority stake in a company does not always bring a solid voice in the company;
- Exit from the investments is complicated.

[5] Figure includes investments in Caribbean and Pacific States, but excludes South Africa.

5. Main conclusion: the need to combine financial and non-financial support

43. Banks tend to charge SMEs high interest rates and to adopt a rigorous and pre-emptive approach with respect to collateral because of the difficulty they face in identifying creditworthy and promising SMEs. The most efficient way to encourage lending to SMEs is to improve existing institutions' ability to construct profitable and efficient SME lending programmes. This can be achieved by minimising the risks through appropriate tools and methodologies to assess the creditworthiness of potential SME borrowers and to lower the overall costs of lending to SMEs, as reviewed in the above sections.

44. Business development services (BDS) providers can play an important role in this process thanks to their closeness to clients and to their direct knowledge of enterprises' financial status and past performance. BDS providers are often better placed than financial institutions to identify potential clients, ascertain their credit-worthiness, diffuse adequate financial and accounting techniques, pre-screen project proposals, monitor repayment, exert peer pressure, and maintain one-to-one contacts during the entire payback period. Thus, the complementarity between BDS provides and financial services helps to:

- Minimize both the risk and transaction cost to creditors and investors;
- Make access to credit and equity less costly and less cumbersome for SMEs.

45. A number of BDS programmes such as **EMPRETEC**[6] link credit delivery to the business development requirements of SMEs. EMPRETEC is designed to build the capacity of SMEs, transform them over time into creditworthy borrowers, and make them more attractive to financial institutions and venture capital funds. Enterprise Africa, a BDS programme of UNDP modelled on EMPRETEC, has developed a joint credit delivery scheme or a credit window which is jointly initiated by Enterprise Africa and a partner financial institution. Credit decisions take into account not only the basic credit appraisal criteria, but also the capacity building services provided to the SME by Enterprise Africa, thus improving the SME's chance of gaining access to credit. Furthermore, Enterprise Africa assumes responsibility for the loan referral and monitoring process, thus reducing lending costs for the partner financial institutions and improving the quality of the monitoring process.

II. E-FINANCE FOR SMEs

Introduction

46. The discussion in part I of this issues note of a number of instruments used in developed countries to enhance the access of SMEs to finance underscores both the importance of the problem and the failure of traditional approaches to it. Part II examines the potential of e-finance (defined mainly as Internet-mediated financial services) to provide cheaper, faster and more widely available finance for SMEs, with a particular emphasis on the prospects for the emergence of SME-oriented e-finance services in the developing countries and economies in transition.

47. As an information-intensive industry, finance is being profoundly affected by the dramatic reduction in the cost of generating, processing and transmitting information that has been brought about by ICT and the Internet. From the standpoint of financial infrastructure development and in particular SME financing, the main transformations that can be noted are:

- Much lower costs and higher speed. The Internet reduces the cost and increases the speed at which financial services can be delivered. It also allows substantial reductions in development and operational costs. Internet banking transactions have a marginal cost of just a few cents compared to one dollar for a

[6] Empretec is an integrated capacity-building programme of UNCTAD that provides developing countries with the institutional framework to foster entrepreneurial capabilities and the growth of internationally competitive SMEs through training, business development services, networking and access to finance.

traditional transaction (the same proportions are true for brokerage). In a competitive environment, this should narrow margins for intermediaries and hence result in less costly finance for SMEs.

- Wider access and networking. Internet-based services can be accessed through a wide variety of devices from anywhere in the world. Both terminals and access protocols are standardized and relatively easy to use. This creates new possibilities for SMEs to enter into global electronic databases, make and receive e-payments and obtain trade financing services from both established global and local players. The resulting increased competition should provide an incentive for local banks, credit insurers and other financial service providers to introduce online services and lower the cost of financing for local SMEs.

- Richer menu of services. The Internet may allow SMEs in developing countries to access an array of new e-finance services and instruments that are quickly emerging in the most advanced markets.

48. Thanks to the Internet, financial information is becoming accessible not only to a small group of professional intermediaries, but is being distributed widely and at a very low cost (or even for free) to hundreds of millions of users, including SMEs. The extremely low unit costs of modern data mining techniques makes it possible to include millions of SMEs in Internet-compatible credit information databases. These and other changes brought about by the Internet amount to a revolution in the financial services industry – a revolution that is increasingly making inroads into developing and transition economies and whose progress there will depend on the extent to which the physical and regulatory infrastructure for e-commerce is effectively put in place.

1. E-finance: The impact on players and markets

49. The changes induced by the Internet in the financial industry are particularly visible among providers in the developed world, but developing countries and economies in transition will also be affected. According to some forecasts, in five years' time the share of e-finance in developing countries may vary between 20 and 35 per cent for e-banking and between 15 and 40 per cent for e-brokerage.[7] This section will take a brief look at the way the Internet is changing the character of market players and influencing three segments that are relevant to SMEs: payments, trade finance and financial information services. However while SMEs are actively participating in traditional finance parts of the mentioned three sectors, their e-finance variants are still new for them and are generally accessible mainly for big players. Moreover, e-brokerage and related e-financial markets, being one of the most advanced parts of e-finance, are even less relevant for the purposes of developing SME e-financing and therefore are not addressed by this issues note.[8]

1.1 Emerging e-finance players

50. A common misconception about the economic implications of the Internet was that it would reduce the role of intermediaries. Technology, it was said, would mean the practical disappearance of barriers to entry and the eventual triumph of aggressive newcomers, unencumbered by legacy systems and habits. This has not happened. According to a study, entry barriers to banking, insurance and e-money issuance are high, though those related to brokerage and payments are less prohibitive. Brand name, economies of scale and physical location represent the most difficult obstacles.[9] Established financial institutions that have a strong customer base and implement aggressive Internet strategies have a major competitive advantage over newcomers. Thus,

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[7] "E-Finance in Emerging Markets: Is Leapfrogging Possible?" by Stijn Claessens, Thomas Glaessner and Daniela Klingebiel, The World Bank, Financial Sector Discussion Paper No.7, June 2001. The higher projections are dependent on improvements in connectivity, the business environment and the regulatory and institutional framework of e-finance.

[8] For a more detailed analysis of e-commerce and financial services see "Building Confidence: E-Commerce and Development Report", UNCTAD 2000, Chapter 2 Section III.

[9] Setsuya Sato, John Hawkins and Aleksander Berentsen, "E-Finance: Recent developments and Policy Implications", in Tracking a Transformation: E-commerce and the Terms of Competition in Industries, Brookings Institution, July 2001.

"clicks-and-bricks" models have largely displaced pure Internet-based models in e-finance. At the same time, new intermediaries such as financial portals, transaction aggregators, financial applications services providers, etc, have emerged.

51. Another misconception was that Internet systems are simple to build. While setting up a basic website can be cheap and easy to do, designing and operating a fully functional Internet-based organization that accommodates a large number of different transactions in a secure manner is a complex and protracted endeavour. In addition, there is limited prior experience to draw on, and the necessary skills and know-how are still scarce.

1.2 Payments and settlement systems

52. In the earliest stages of the development of e-finance, online payment systems were commonly considered to be potential "killer applications". However, the experience of the emergence of Internet-based payment systems proved that various payment systems and institutions can coexist and adapt to the requirements of the Internet and new applications and actors have not replaced the traditional ones. Many new online systems have run into difficulties, sometimes fatally. At the same time credit and debit cards are still the main choice of settlement for business to consumer (B2C) e-commerce transactions.

53. Online versions have been developed for practically all the conventional payment instruments, such as cash, money orders, giro transfers, checks, drafts, notes, and bills of exchange. The same is true for the wholesale payment systems, including so-called automated clearing house (ACH) networks, "wire transfers" for big volume payments and inter-bank payments networks. Electronic Bill Presentment and Payments (EBPP) systems are beginning to be used in payment transactions between companies and between them and their banks.

54. In spite of the mixed record of the first wave of innovation, the development of Internet-based payment systems has not slowed down. On the contrary, it has intensified and broadened in scope. The B2C and B2B (business-to-business) segments continue to attract new entrants, including SMEs. Some of them are start-ups backed by venture capital while others are well known IT providers.

55. More importantly, banks are beginning to change their attitude towards the application of the Internet in their core B2B high-value, ACH and other payment networks. The Society of Worldwide Interbank Financial Telecommunications (SWIFT), the biggest inter-bank payment system (with a daily payments traffic of more that US$ 5 trillion) and major card companies such as Visa are becoming the main players in the sector of Internet-based settlements systems. In December 2000, SWIFT started to migrate to a new IP-based network, SWIFTNET, while Visa is planning to rapidly expand the share of its online and offline smart cards, including those for companies, i.e. mainly SMEs.

56. In order to provide electronic signatures and personal identification technologies, some large banks have developed their own certification authorities (CA). Several major financial institutions have also created a global public key infrastructure (PKI) – the IDENTRUS consortium – which is operated by the member banks as root certification authority underneath their local CAs. IDENTRUS seeks to create a global trust infrastructure for banks and their corporate customers in order to facilitate secure e-payments for business-to-business transactions in more than 133 countries. This and other systems of secure transactions are especially important for SMEs. If an SME is accepted by a PKI, it already gives positive signals to its partners about its reliability.

57. In spite of the developments mentioned above, it remains to be seen how quickly and to what extent the major payment systems will move from an architecture based on closed networks, proprietary protocols and mono-industry governance to one built around open networks, standard protocols and cross-industry governance and interoperability.

1.3 Trade finance systems

58. Although electronic trade finance packages existed before the emergence of the Internet, they were based on proprietary systems owned and operated by individual networks of banks or groups of banks. Progress in the substitution of paper documents by their electronic equivalents was sluggish.

59. E-finance has started to change this situation. Electronic versions of the existing instruments for third party protection against non-payment and non-performance risks, including documentary credit, credit insurance, bonding, factoring and forfeiting, are being developed quickly. A number of Internet-based trade finance solutions have been launched (Bolero, TradeCard and Certegy, among others), often backed by key trade finance players. However, for the time being their share of global trade finance remains small.

1.4 Electronic credit information and management systems

60. The Internet has cut down the cost of credit information, which used to be expensive and difficult to obtain. Information-processing technologies have also created opportunities for the development of new, more sophisticated applications. For example, scoring and data mining are now linked, which allows more efficient company research and product pricing.

61. Most comprehensive Internet-based services are delivered by well-established commercial information companies (such Dun and Bradstreet or Equifax) or credit insurance providers (such as Coface) with a long history of international presence. The continued leadership of these players can be linked to the persistence of high barriers to entry, derived from the high costs of the compilation of credit information databases (with SMEs representing the main part of their content). Those companies that have the largest databases with the longest historical coverage and huge updating capacities enjoy a strong and lasting comparative advantage.

2. E-finance experiences in developing countries: A wide variety of situations and approaches

62. Although the level of e-readiness of developing countries is extremely uneven, their awareness about the contribution that e-commerce can make to their development prospects is growing rapidly. In e-finance this interest has translated into an increasing number of initiatives launched by the various levels of national Governments, international organizations, local and foreign private sector and non governmental organizations. Local, regional and global projects are being initiated by established businesses and by new entrants. Subsidiaries of well-known groups are improving local access to global Internet services as well as adding local content to their services in co-operation with local partners.

63. At the regional level, a number of cross-border services have emerged in Latin America and the Asia-Pacific region. Various e-finance projects, created by global banks such as Citibank, HSBC and Deutsche Bank, credit card associations like Visa and Mastercard and some others, have had a global scope since their inception. Some of them, such as the CitiBusiness programme and the Visa Business Card, focus on SMEs. Multilateral financial institutions such as the World Bank, the European Commission and the regional development banks, have also funded a number of e-finance projects, for both private and public recipients.

64. Two interesting examples of e-finance initiatives specifically geared to serving the SME market are SMEloan of Hong Kong (China) and Pride Africa. SMEloan, which uses a web-based risk management model, is already the leading online provider of SME finance in Hong Kong (China) and plans to expand its current customer base of 200 SMEs to over 1,000 by mid-2002. Pride Africa provides access to credit to more than 80,000 small-scale entrepreneurs in Kenya, Malawi, Tanzania, Uganda and Zambia.[10]

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[10] World Bank (2001), p. 36. For more details see www.SMEloan.com and www.prideafrica.com

3. Challenges of e-finance for developing countries and their SMEs

3.1 Combining global and local

65. While the Internet creates opportunities for SMEs to undertake e-commerce and e-finance on a global scale, it also gives them the possibility to trade, pay and get paid online at the regional and the local levels. The balance between the costs of Internet access and communications on one side and those of physical presence on the other will determine the pace at which enterprises will engage in local e-commerce and e-finance.

Emerging global online finance platforms and the needs of developing countries and their SMEs

66. The existing global on-line finance platforms, such as SWIFT or IDENTRUS, are not designed to address the specific needs of SMEs in developing countries. On the other hand, local e-finance platforms are either still not there or lack reach and functionality. While locally designed e-payments systems and other e-financial services infrastructures may grow in importance in the medium term, global e-finance platforms should be encouraged to design specific functionalities for SMEs. In any case the interoperability of the various e-finance platforms will be crucial. In practice, interoperability is as much a business question as it is a technical problem. Conditions of interoperability should therefore be given careful consideration.

67. From the viewpoint of the development of SMEs and the facilitation of their participation in international trade, accessing rating and data mining services is perhaps the most important way in which developing countries could benefit from e-finance. However, ensuring the presence of the SMEs of the developing countries in such databases presents a formidable challenge.

68. To be listed in platforms such as a rating of COFACE, SMEs need to produce reliable financial statements and to update them regularly. This will in turn require serious efforts to upgrade their managerial skills and practices. To reach local SMEs and build up such databases, local Internet-compatible credit information and credit insurance services are needed. They might be delivered either by local entities or local branches of the global players. The same is true for factoring and leasing. Local banks will also be under pressure to adapt to electronic letters of credit and other e-trade finance techniques, thus helping to link local traders with their e-commerce counterparts abroad.

69. E-finance will stimulate the emergence of new forms of business organizations, hubs, networks and associations. It will therefore be important to allow and facilitate the development of new networks, to develop e-finance B2B and B2C portals and marketplaces and to ensure that they are accessible also for the SMEs of developing countries. For that to happen, SMEs need to be able to produce and disseminate corporate and financial information about themselves. They also need to receive information, advice and training on how to make the best use of existing e-finance systems, especially when choosing among different offers of financing. This, for example, is the main objective of the Export Finance Matchmaker created by the Department of Commerce of the United States, which SME exporters can use to access a menu of choices in trade finance.[11]

Applying global e-finance instruments locally

70. The menu of global e-finance products and techniques includes the quasi totality of traditional payments and trade finance products. Starting from online services designed for SMEs (such as those developed by SMEloan and Pride Africa), the choice of e-finance services for SMEs might be extended to Internet banking (which is already actively used in Latin America and Asia to serve high-worth clients and

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[11] See www.ita.doc.gov/td/efm

companies), an array of electronic trade finance products (including e-letters of credit, e-credit information and e-credit insurance, e-factoring, e-leasing, e-warehouse financing and other electronic modes of asset-based financing) and smart cards.

71. The main advantage of smart cards (in which the electronic equivalent of cash is stored electronically) in a developing country context is that they can reduce the need for a costly and comprehensive financial infrastructure, thus providing an opportunity for technological leapfrogging. An additional reason for which smart cards can be of interest for SMEs is that they offer a relatively easy and inexpensive way to generate credit record information, the lack of which is among the constraints that limit their access to credit. Smart cards can also serve as an identification means, thus ensuring the authentication of parties and the security of their e-payment or e-financing transaction. And they can be used to settle small-value offline transactions. For all these reasons, smart cards are considered to be a potentially far more efficient alternative to traditional development bank lending in regions such as Africa[12]. A number of initiatives, for instance in East and Southern Africa (where 16 countries jointly acquired the franchise rights for Mondex, an e-cash system), Ghana (which plans to use smart cards to move from almost no e-finance infrastructure to full e-cash capability) and South Africa (where the Post Office uses them, among other things, to provide access to banking services in remote rural areas), indicate growing interest in these e-finance tools.

72. Local financial service providers enjoy the advantage of a much better knowledge of local companies and of local e-finance arrangements. This should facilitate the development of Internet banking and card-related services by leading local commercial banks. In countries where commercial banking is weak, partnerships with global financial institutions with the e-finance know-how could bring in new commoditized e-finance products to service SMEs. Facilitating the establishment of global financial service providers may also provide incentives for local financial service providers to adapt to e-finance practices.

73. Regional cross-border groupings may also be a possible avenue for the development of local e-finance services. In Latin America, several ventures have gathered banks and IT companies together to offer local and regional services. But the long-term sustainability of such alliances will depend on the objectives and agenda of their members. The participation of multilateral development banks in co-financing and providing logistical support for similar ventures at both the regional and local levels might add momentum and credibility to that process. One example of this possible role of multilateral institutions is provided by the E-Finance Global Initiative recently launched by the International Financial Corporation, which aims at helping financial intermediaries to target small-scale businesses.

74. The dominant model in e-finance today is the "click-and-bricks" financial institution. This model may be difficult to implement in those countries where the "bricks" are few. In this case, the SMEs will have to rely on remote Internet banking services from established providers, more or less in the same way as countries with deficient fixed-line telecommunications have to rely on GSM as their main telecommunication infrastructure.

75. Governments may play a role by using the existing public infrastructure such as post offices. For example, post offices in South Africa are becoming e-finance hubs, giving their millions of users access to Internet and to some basic e-payments. A similar initiative is being implemented by the Government of India, which is equipping its post offices with high-speed Internet access. Many regional and city authorities in China are also developing interlinked e-business frameworks, including e-finance elements.

Leapfrogging and getting linked to global e-finance

76. Thanks to e-finance, developing countries have the possibility to skip stages in the development of their financial sector. However, it is not certain that every developing country will be in a position to benefit from these opportunities for technological leapfrogging. The absence of a financial and technological history is also

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[12] World Bank (2001), p. 35.

a two-edged sword. On the one hand, it makes it easier to build a cutting-edge electronic financial system from scratch, as was the case in Poland for example; on the other hand, building an e-finance sector from scratch requires the mobilization of complex skills in the financial, telecom and information technology sectors, which many developing countries do not have and cannot develop without strong external support. In spite of this, the potential is real and in some cases substantial, as the examples of countries like Estonia, Republic of Korea, Brazil and some other countries have proved.

3.2 Creating an enabling environment

The importance of the regulatory and contractual framework

77. The areas in which governmental action can contribute to creating a supportive environment for the development of e-finance are not fundamentally different from those commonly considered important for the development of e-commerce in general. They involve issues such as the promotion of competitive telecommunications services, the adaptation of legislation to paperless trade, facilitating the implementation of systems to ensure security in electronic transactions, enhancing the IT skills of the workforce, promoting wider access to computers and the Internet, etc. However, because of its specific characteristics, some of these aspects are of even greater importance in the case of e-finance.

78. An appropriate legal framework that generates trust among all the players involved in e-finance (service providers, SMEs and their customers and suppliers) is crucial. Such a framework should also create a level playing field between established players and newcomers, as well as between banks and technology providers.

79. Governments need to re-examine the legal separation between various financial offerings such as commercial banking, securities and insurance. This separation becomes obsolete when a single financial Internet portal can be used to open an interest-bearing cash account with a brokerage house, take out a loan, invest in the stock market or buy an insurance policy.

80. At the same time, it is essential to ensure the overall soundness and stability of financial systems. This may entail new approaches to prudential supervision in order to cover new activities and participants. Some authors suggest that a smooth transition from an "institutional oriented" approach to a more "functional" one may enhance the environment for financial operators[13]. Issues such as the quality of and access to information, intellectual property rights, security and privacy, consumer protection, service quality, taxation and others are becoming more important than the direct provision of financial services to target groups. The issues of security and privacy might be among the most serious hurdles in the way of the developing countries to e-commerce and e-finance.

81. Another aspect of the regulatory framework of the financial industry that is being affected by e-finance concerns exchange controls and other restrictions on the movement of capital. While e-finance does not eliminate borders completely, it does make them more porous and creates new ways in which businesses and households can circumvent restrictive regulations. Thus, in many countries where exchange controls are in place, residents are using the Internet to open accounts with foreign banks or brokerage houses.

4. Conclusion

82. The development of e-finance in general and in developing countries in particular is so recent that definite conclusions on its implications for enhancing the competitiveness of SMEs cannot be drawn yet. Moreover accurate methods to measure e-finance have not been developed yet and data are difficult to collect. Nevertheless, some preliminary observations can be made.

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[13] World Bank (2001) p.91

Foundations for early hopes

83. In developed countries, e-finance has already led to significantly lower costs and greater access to financial information. In developing countries, there are some initial indications that the Internet can stimulate the development of local financial services, thereby contributing to the improvement of productivity and competitiveness. On a cross-border basis, e-finance services aiming at facilitating international trade are off to a promising start. A medium-term outcome of these processes should be that SMEs in developing countries could enjoy new opportunities to obtain finance at a significant lower cost.

But the impact of e-finance on the SMEs remains limited

84. However, for all the encouraging signs, the impact of e-finance on SMEs appears to be limited so far. The majority of B2B initiatives aim at larger companies. The number of SMEs in developing countries capable of using e-finance services remains small. Basic drawbacks are the high cost of hardware and of Internet connections and the conservatism and lack of skills of small entrepreneurs. Furthermore, while access to e-finance through local banks might be technically possible, the weak state of credit information, contract enforcement and other problems of conflict resolution framework still make it rather problematic.

Critical factors of success

85. Flexibility and agility are the rule in e-business in general. E-finance is still in its early stages, when learning from mistakes will be essential in order to develop a better understanding of its benefits and drawbacks. In this fast-changing universe, first movers do not keep a sustainable advantage for long. The ability to change course and to modify the business model and/or technical architecture in response to changing market requirements and evolving technology is a key competitive advantage. The professionalism, quality of management and versatility of banks and other financial service providers are equally crucial.

86. In order to benefit from e-finance tools that are already available (especially in fields such as payments, credit risk and trade finance), SMEs will need to adapt their business culture and organizational structures. They should in particular improve their capacity to generate financial information that can be incorporated in global Internet-based platforms and upgrade their skills to understand and use e-finance information and instruments.

87. Increased competition among financial services providers is the main channel through which e-finance will improve the competitiveness of the SMEs of developing countries, by accelerating financial innovation, reducing transaction costs and enhancing the quality and widening the choice of financial services. It is therefore important that developing countries generate an environment in which competition and innovation in e-finance and the adoption of the best practices already in place in the more advanced countries can take place. Most of the policies and support measures that are required for the creation of such an enabling environment for e-finance coincide with those that are needed for the facilitation of e-commerce in general in developing countries. This is an undertaking that calls for multiple partnerships between Governments and the private sector and should be actively supported by international organizations. Governments should also facilitate the emergence of cross-border partnerships at the regional and global level, as they will be essential for developing countries to realize the potential opportunities for technological leapfrogging in e-finance.

Issues for consideration by the Expert Meeting

88. SMEs are considered to be high-risk and high-cost borrowers by financial institutions. The concern of financial institutions is partly justified, since SMEs in many cases lack reliable financial information and collateral. Both of these deficiencies can be resolved in ways that do not distort market-oriented ways of conducting business. The Experts will discuss best practices in financing SMEs, including through the application of e-finance, in developing countries. In that respect they may wish to consider the following

questions and suggest policy options and actions to be taken at the national and international level. They may also wish to make specific suggestions which could be considered by the upcoming Conference on Financing for Development.

89. On finance:

- What measures could developing countries use to induce commercial banks to lend to SMEs? In particular, could restrictions on SME lending be lifted? How could guarantee schemes be improved so that the target audience is reached and moral hazard avoided? How effective would targets and mandatory reporting requirements be in increasing pressure on commercial banks to lend to this underserved sector? How can banks be encouraged to streamline procedures?

- How can simplified and standardized accounting and reporting systems for SMEs reduce risks and transaction costs? How could such simplified and standardized accounting systems be best introduced?

- How replicable are the innovative financial mechanisms in developing countries and how can information about the most appropriate innovative financial mechanisms be disseminated? How effective would regional programmes be for capacity building and training of bank staff ? What role could regional development banks play in this regard?

- What measures can international financial institutions take to ensure that their beneficiaries in the financial sector in developing countries reach SMEs and use innovative mechanisms? How can they encourage transnational banks to apply the same policies and techniques for reaching SMEs in home and host countries?

- How can developing countries and the international community ensure that the provision of finance is linked to the provision of business development services (BDS)? How can partnerships between banks and BDS providers be encouraged?

- How can information flows be improved in order to deepen capital markets enough to serve SMEs?

- How can the obstacles to SME venture capital funds, leasing and insurance be overcome in developing countries?

90. On e-finance:

- What kind of policy framework should developing countries adopt to improve Internet access and related technical base and skills for local SMEs and financial service providers?

- How can the creation of local and regional credit information services be fostered and SMEs encouraged to enter into local, regional and global online information databases as a first step to access to e-finance?

- How can local financial institutions be encouraged to go online and develop SME-specific lines of e-finance?

- What can be done to ensure that the assistance of international financial institutions focuses more on supporting capacity building in the area of e-finance?

- How can best international practices in e-finance for SMEs be disseminated among developing and transition economies?

- How can global and local e-finance providers be encouraged to focus on SMEs?

- How can the main stakeholders develop, in cooperation with each other, technical assistance and training packages on e-finance for both local financial services providers and SMEs?